

## Chapter 1 The Science of Biology

## Chapter Vocabulary Review

**Short Answer** *On the lines provided, answer the following questions.*

1. What is science?

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2. What is the relationship between observation and gathering data?

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3. How do you make an inference?

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4. What is the difference between a manipulated variable and a responding variable in a controlled experiment?

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5. What is the difference between sexual reproduction and asexual reproduction?

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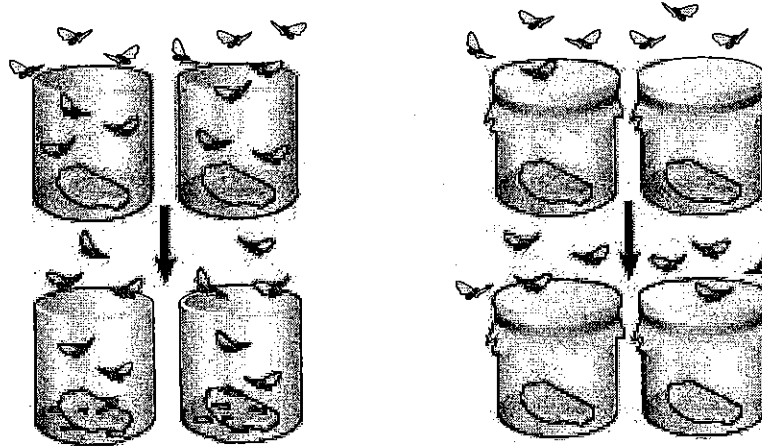
**Matching** *On the lines provided, write the letter of the answer that best matches each description.*

- \_\_\_\_\_ 6. hypothesis
- \_\_\_\_\_ 7. cell culture
- \_\_\_\_\_ 8. data
- \_\_\_\_\_ 9. evolve
- \_\_\_\_\_ 10. metric system
- \_\_\_\_\_ 11. homeostasis
- \_\_\_\_\_ 12. cell fractionation
- \_\_\_\_\_ 13. microscope
- \_\_\_\_\_ 14. biology
- \_\_\_\_\_ 15. theory

- a. process of keeping internal conditions fairly constant
- b. device that produces images of structures that are too small to see with the unaided eye
- c. proposed scientific explanation for a set of observations
- d. group of cells that develops from a single, original cell
- e. well-tested explanation that unifies a broad range of observations
- f. information gathered from observation
- g. the science that seeks to understand the living world
- h. to change over time
- i. decimal system based on certain standards and scaled on multiples of 10
- j. technique that separates different cell parts

**Multiple Choice** On the lines provided, write the letter of the answer that best completes the statement or answers the question.

- \_\_\_\_\_ 16. What theory was disproved by the experiment shown in the diagram?



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|----------------|---------------------------|
| a. homeostasis | c. metabolism             |
| b. evolution   | d. spontaneous generation |
- \_\_\_\_\_ 17. What is the name for a collection of living matter enclosed by a barrier that separates it from its surroundings?
- |                 |                       |
|-----------------|-----------------------|
| a. cell         | c. cell fractionation |
| b. cell culture | d. DNA                |
- \_\_\_\_\_ 18. What is the name for a combination of chemical changes that builds up or breaks down material in an organism?
- |                |                        |
|----------------|------------------------|
| a. homeostasis | c. sexual reproduction |
| b. metabolism  | d. cell culture        |
- \_\_\_\_\_ 19. What type of microscope allows light to pass through the specimen and uses two lenses to form an image?
- |                                     |                                 |
|-------------------------------------|---------------------------------|
| a. transmission electron microscope | c. compound light microscope    |
| b. electron microscope              | d. scanning electron microscope |
- \_\_\_\_\_ 20. The type of microscope that focuses beams of electrons on specimens is the
- |                         |                               |
|-------------------------|-------------------------------|
| a. compound microscope. | c. scanning microscope.       |
| b. electron microscope. | d. compound light microscope. |